

**510(K) SUMMARY**

**LITETOUCH Dental Laser System**

**510(k) Number K** 061966

**Applicant's Name:** Light instruments Ltd  
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**Contact Person:** Yoram Levy, Qsite  
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**Trade Name:** ***LITETOUCH*** Dental Laser System

**Classification:** **Name:** Laser Instrument, Surgical, Powered  
**Product Code:** GEX  
**Regulation No:** 21 CFR 878.4810  
**Class:** II  
**Panel:** General & Plastic Surgery

**Device Description:**

The ***LITETOUCH*** is an advanced microprocessor-controlled laser system, composed of the following units:

- Control panel
- Laser accessory, including the Erbium laser assembly and water spray equipment
- High-voltage power supply, capacitor bank and switching module
- Cooling unit
- Tip power detection module



**Intended Use Statement:**

The **LITETOUCH** dental laser system is intended to aid during dental procedures performed in oral and maxillofacial surgery and dentistry.

The Erbium:YAG laser is indicated for a variety of hard tissue (tooth and bone) applications, and for the incision, excision, cutting, ablation, vaporization, and coagulation of soft tissue in oral and maxillofacial surgery and dentistry. This includes the following:

**Hard Tissue Indications of Erbium Laser Energy:**

- Caries removal
- Cavity preparation
- Enamel etching
- Enameloplasty, excavation of pits and fissures for placement of sealant

**Bone Indications of Erbium Laser Energy:**

- Contact and non-contact cutting, shaving, contouring, and resection of oral osseous tissue (bone)
- Apicoectomy - amputation of the root end
- Cutting bone to prepare a window access to the apex (apices) of the root(s)
- Osseoplasty
- Osteotomy
- Osseous crown lengthening

**Soft Tissue and Periodontal Indications of Erbium Laser Energy:**

- Excisional and incisional biopsies
- Exposure of unerupted teeth
- Incision and drainage of abscesses
- Gingival incision and excision
- Gingivoplasties
- Gingivectomies, Gingivectomy in case of hyperplasias of the gingival or excision of hyperplasias
- Gingival troughing for crown impressions
- Hemostasis
- Implant recovery
- Frenectomies and frenotomies
- Fibromatosis (fibroma removal)
- Benign and malignant lesion removal
- Operculectomy
- Oral papillectomies



- Reduction of gingival hypertrophy
- Soft tissue crown lengthening
- Preprosthetic surgery: flabby alveolar ridge, vestibuloplasty, exposure of implants, hyperplasia, epulides, papillomas, fibromatoses benign growths
- Vestibuloplasty
- Sulcular debridement (removal of diseased or inflamed soft tissue in the periodontal pocket to improve clinical indices including gingival index, gingival bleeding index, probe depth, attachment loss and tooth mobility)

**Endodontal Indications of Erbium Laser Energy:**

- Tooth preparation to obtain access to root canal
  - Pulpotomy, Pulpotomy as an adjunct to root canal therapy
  - Pulp extirpation
  - Root canal debridement and cleaning
- Root canal preparation including enlargement

**Predicate Devices:** Substantial equivalence to the following predicate devices is claimed:

|   |         |                           |
|---|---------|---------------------------|
| OpusDent Family of Dental Laser Systems           | K040270 | Decision Date: 12/16/2004 |
| Hoya ConBio VersaWave™ Dental Er:YAG Laser System | K041710 | Decision Date: 08/03/2004 |

**Performance Standards**

**LITETOUCH** Dental Laser System complies with U.S. Federal Performance Standards 21 CFR 1040.10 and 21 CFR 1040.11 for class IV Laser Products.

- In addition, the device complies with the European Medical Directive 93/42/EEC concerning medical devices (Annex II) and with the following voluntary standards:
- **EN 60601-1** (Medical Electrical Equipment-Part 1: General Requirements for Safety-1. Collateral Standard: Safety Requirements for Medical Electrical Systems).
- **EN 60825-1**(Safety of laser products);
- **EN 60601-2-22** (Medical device equipment, Particular Requirements for the safety and diagnostics and therapeutic laser equipment).
- **CISPR 11** (EMC),
- **IEC 61000-4-2/3/4/5** (Electromagnetic compatibility (EMC) –

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Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test,

- *EN55011* and *IEC 801-2*

A detailed description appears in **Section 14**.

## **Summary of Clinical performance data**

The safety and efficacy of Er:YAG Laser devices with wavelength of 2.94 micron and power up to 8.5 Watts is well established in scientific research and literature including procedures performed in hard and soft oral tissue, Endodontology and Periodontology.

Due to the comprehensive animal and clinical study performed in scientific research and literature, and since the power, wavelength, pulse duration and frequency of the *LITETOUCH* Dental Laser System are well within the previous cleared values, Light Instruments believes that animal and clinical studies are not required to determine the safety and efficacy of the device.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

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Light Instruments Ltd.  
% Qsite  
Yoram Levy  
General Manager  
31 Haavoda Street  
Binyamina, Israel 30500

Re: K061966

Trade/Device Name: **LITETOUCH** Dental Laser System

Regulation Number: 21 CFR 878.4810

Regulation Name: Laser surgical instrument for use in general and plastic surgery and in dermatology

Regulatory Class: II

Product Code: GEX

Dated: July 9, 2006

Received: July 12, 2006

Dear Yoram Levy:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the

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quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at (240) 276-0115. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (240) 276-3150 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely yours,



Mark N. Melkerson

Director

Division of General, Restorative  
and Neurological Devices

Office of Device Evaluation

Center for Devices and  
Radiological Health

Enclosure



## **INDICATIONS FOR USE STATEMENT**

510(k) Number (if known):

K 061966

**Device Name:** ~~LITETOUCH~~ **LITETOUCH** Dental Laser System

### **Indications for Use:**

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Prescription Use   X    
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use             
(21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE -CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation

~~(Division Sign-off)~~

(Division Sign-off)

Division of General & Plastic Surgery Devices  
510(k) Number

**Division of General, Restorative,  
and Neurological Devices**

510(k) Number 16061966

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